

REMARKS

Claims 1 and 7 have been amended by deleting a recitation “N,N-dimethylacetamide (DMA), N-methyl pyrrolidone (NMP)” No new matter has been added. Applicant respectfully requests entry of the amendments and reconsideration of the present application in view of the amendments and the remarks set forth below.

Discussion of the Claim Rejections Under 35 U.S.C. § 103

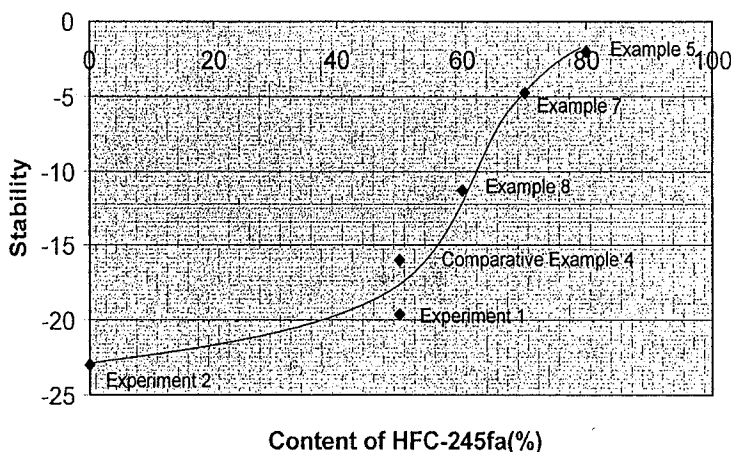
Claims 1 and 3 have been rejected under 35 U.S.C. § 103 as being unpatentable over Ota et al (JP Publication No. 2002/201251) and in view of Kitamura et al. (U.S. Patent No. 5,895,793). Applicant respectfully submits that pending claims are allowable over Ota et al. and Kitamura et al., as discussed below.

Discussion of Patentability of Independent Claims 1

Previously, Applicant argued that Ota merely discloses a broad range of amount of HFC-245fa (1~75%, preferably 10~60%, more preferably 20~50%. [Paragraph 0008]), and the evaluation results in Table 3 of the present application indicate that the portion of Ota’s recited range, outside of the claimed range, is inoperative with the present claimed invention due to a poor dimensional stability. However, the Examiner asserts that the data merely shows the superiority of the property of HFC-245fa rather than an unexpected change in dimensional stability and the criticality of the claimed range has not been established.

In response to the Examiner’s assertion, Applicant submits herewith a Declaration under 37 C.F.R. § 1.132, showing unexpected advantages and the criticality of the claimed range. The experimental data is summarized in the graph shown in right, along with the data in Table-3 of the present

Stability by HFC-245fa amount



specification. In the graph, the data points for Experiment 1 from the Declaration and Comparative Example 4 from the specification at 50% HFC-245fa have been averaged for clarity. Although, the experimental results reported in the declaration result from materials produced without compatibilizer, a reduction by 10% of the compatibilizer would only be expected to mildly affect the stability results. This can be seen by the slight increase in stability for Experiment 1 relative to Comparative Example 4 at 50% HFC-245fa and for Example 5 and 9 at 80% HFC-245fa.

As the graph indicates, the dimensional stability change with respect to the HFC-245fa amount is very gradual while the HFC-245fa amount is below 60%. In contrast, the dimensional stability changes drastically above 60%. This sudden shift of increase rate is unexpected and proves the criticality of the ratio of the HFC-245fa to HFC-365mfc. One with ordinary skill in the art could not have predicted that the claimed recited range would have such drastic effects on stability. Thus, any *prima facie* case of obviousness with respect to Claim 1 would be rebutted.

Moreover, Claim 1 recites, among other things, "compatibilizer selected from the group consisting of γ -butyrolactone (GBL) and methoxypropyl acetate (MPA)". Although, Kitamura et al. teaches a use of N,N-dimethylacetamide (DMA) as a stabilizer, Kitamura et al. does not teach any use of compatibilizer. Moreover, Ota et al. do not teach the use of a compatibilizer. Thus, neither reference provides a reason to select any of the compatibilizer. Accordingly, upon deleting N,N-dimethylacetamide (DMA) from Claim 1, the cited reference can not lead one with the ordinary skilled in the art to use the remaining compatibilizer now recited in the claim in combination with HFC-245a. Consequently, no *prima facie* case of obviousness has been established with respect to Claim 1. Applicant respectfully requests withdrawal of the rejection.

Discussion of Patentability of Dependent Claim 3

Claim 3 depends from Claim 1, and further defines additional technical features of the present invention. In view of the patentability of Claim 1, and in further view of the additional technical features, Applicants respectfully submit that Claim 3 is patentable over the prior art.

Claim Rejection – 35 U.S.C. § 103

Claims 4 and 5 have been rejected under 35 U.S.C. § 103 as being unpatentable over Ota et al (JP Publication No. 2002/201251) and in view of Kitamura et al (U.S. Patent No. 5,895,793) and further in view of Singh et al (U.S. Patent No. 6,319,962). Since Singh et al is silent about the use of the HFC-245fa, combined with HFC-365mfc and Claims 4 and 5 are dependent from Claim 1, the above argument is applicable. Applicants respectfully request withdrawal of the rejection.

Claim Rejection – 35 U.S.C. § 103

Claim 6 has been rejected under 35 U.S.C. § 103 as being unpatentable over Ota et al (JP Publication No. 2002/201251) and in view of Kitamura et al (U.S. Patent No. 5,895,793) and further in view of Singh et al (U.S. Patent No. 6,319,962) and Sugiyama et al. (U.S. Patent No. 6,313,060). Since Sugiyama et al is silent about the use of the HFC-245fa, combined with HFC-365mfc and Claim 6 is dependent from Claim 3, which is dependent from Claim 1, the above argument is applicable. Applicants respectfully request withdrawal of the rejection.

Claim Rejection – 35 U.S.C. § 103

Claim 2 has been rejected under 35 U.S.C. § 103 as being unpatentable over Ota et al (JP Publication No. 2002/201251) and in view of Kitamura et al. (U.S. Patent No. 5,895,793). Claim 2 recites among other things “HFC-245fa/HFC-365mfc \geq 60/40 (weight ratio)”. Therefore with the same reason presented at the discussion of patentability of Claim 1, Claim 2 is patentable. Applicants respectfully request withdrawal of the rejection.

Claim Rejection – 35 U.S.C. § 103

Claims 7-9 and 13 have been rejected under 35 U.S.C. § 103 as being unpatentable over Ota et al (JP Publication No. 2002/201251) and in view of Kitamura et al. (U.S. Patent No. 5,895,793). Applicant respectfully submits that pending claims are allowable over Ota et al. and Kitamura et al., as discussed below.

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Discussion of Patentability of Independent Claims 7

Claim 7 recites, among other things “weight ratio of HFC-245fa/HFC-365mfc is 60/40 or higher” and “compatibilizer selected from the group consisting of γ -butyrolactone (GBL), methoxypropyl acetate (MPA)” as recited in Claim 1. Therefore with the same reason presented at the discussion of patentability of Claim 1, Claim 7 is patentable. Applicants respectfully request withdrawal of the rejection.

Discussion of Patentability of Dependent Claim 8, 9, and 13

Claim 8, 9, and 13 depends directly or indirectly from Claim 7, and further defines additional technical features of the present invention. In view of the patentability of Claim 7, and in further view of the additional technical features, Applicants respectfully submit that Claims 8, 9, and 13 are patentable over the prior art.

Claim Rejection – 35 U.S.C. § 103

Claims 10-12 have been rejected under 35 U.S.C. § 103 as being unpatentable over Ota et al (JP Publication No. 2002/201251) and in view of Kitamura et al (U.S. Patent No. 5,895,793) and further in view of Singh et al (U.S. Patent No. 6,319,962). Since Singh et al is silent about the use of the HFC-245fa, combined with HFC-365mfc and Claims 10-12 depend indirectly from Claim 7, with the same reason presented at the discussion of patentability of Claim 7, Claims 10-12 are patentable. Applicants respectfully request withdrawal of the rejection.

Claim Rejection – 35 U.S.C. § 103

Claim 14 has been rejected under 35 U.S.C. § 103 as being unpatentable over Ota et al (JP Publication No. 2002/201251) and in view of Kitamura et al (U.S. Patent No. 5,895,793) and further in view of Bartlett et al. (U.S. Patent No. 5,164,419). Since Bartlett et al are silent about the use of the HFC-245fa, combined with HFC-365mf and Claim 14 is dependent from Claim 13, which is dependent from Claim 7, the same reason presented at the discussion of patentability of Claim 7 is applicable. Applicants respectfully request withdrawal of the rejection.

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Claim Rejection – 35 U.S.C. § 103

Claim 15 has been rejected under 35 U.S.C. § 103 as being unpatentable over Ota et al (JP Publication No. 2002/201251) and in view of Kitamura et al (U.S. Patent No. 5,895,793) and further in view of Brock et al (U.S. Patent No. 5,786,400). Since Brock et al are silent about the use of the HFC-245fa, combined with HFC-365mf and Claim 15 is dependent from Claim 13, which is dependent from Claim 7, the same reason presented at the discussion of patentability of Claim 7 is applicable. Applicants respectfully request withdrawal of the rejection.

CONCLUSION

In the light of the applicant's amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

No Disclaimers or Disavowals

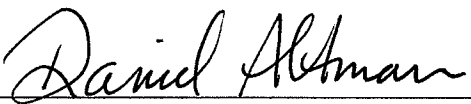
Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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